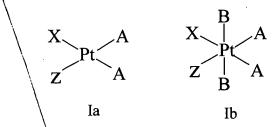


## **Claims**

We claim:

A cis-platinum complex of the formula Ia or Ib 1.





or a pharmaceutically acceptable salt thereof

wherein:

each A is independently an anion;

each B is independently halo, hydroxy, carboxylate, carbamate or a carbonate

ester, 10

> Z is a substituted 5- or 6-membered, heterocyclic moiety wherein at least one substituent sterically hinders access of the Pt atom to a DNA strand of a tumor cell, and wherein Z is other than pyridine; and

X is NH<sub>3</sub> or mono- or dialkyl substituted NH<sub>3</sub>.

- The complex of chain 1 herein each A is independently halo, hydroxy, 2. 15 carboxylate, carbamate, or carbanate ester, or wherein both A together form a bi-dentate carboxylate or sulfate.
  - 3. The complex of claim 1 wherein both A are halo.
  - The complex of claim 3 wherein both A are chloro. 4.
- 20 5. The complex of claim 1 wherein both B are hydroxy or carboxylate.
  - 6. The complex of claim 1 wherein X is NH<sub>3</sub>.

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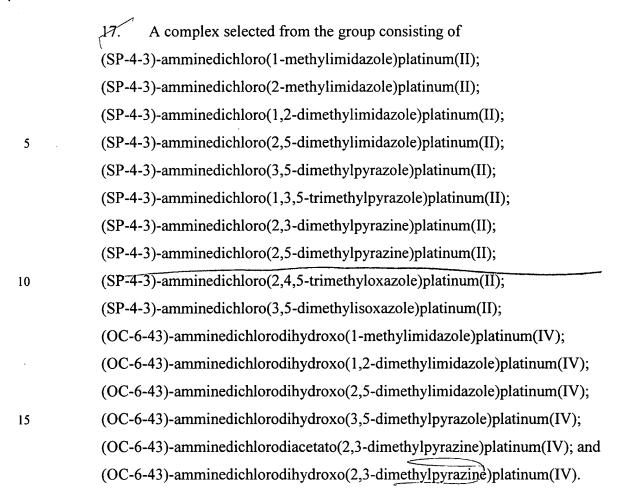
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- 7. The complex of claim 4 wherein X is NH<sub>3</sub>.
- 8. The complex of claim 1 which is of formula Ia wherein Z is a 5-membered heterocyclic amine or is pyrazine.
- 9. The complex of claim 7 which is of formula Ia wherein Z is a 5-membered between between the property between th
  - 10. The complex of claim 1 wherein Z is a 5-membered monocyclic amine with one or more additional heteroatoms.
  - 11. The complex of claim 7 wherein Z is a 5-membered monocyclic amine with one or more additional heteroatoms.
  - 12. The complex of claim 10 wherein Z is a imidazole, pyrazole, thiazole, oxazole, or isoxazole.
  - 13. The complex of claim 11 wherein Z is a imidazole, pyrazole, thiazole, oxazole, or isoxazole.
    - 14. The complex of claim 12 wherein Z is 1,3,5-trimethylpyrazole.
  - 15. The complex of claim 1 wherein said at least one substituent is coupled to the heterocycle at a position other than the position adjacent to the coordinating atom in said heterocycle.
  - 16. The complex of claim 1 wherein the solubility of the compound in aqueous solution is greater than or equal to 1 mg/ml.

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- 18. A pharmaceutical composition comprising as active ingredient the complex of claim 1, in admixture with a pharmaceutically acceptable diluent or carrier and optionally one or more other therapeutic agents.
  - 19. The composition of claim 18, in unit dosage form.
  - 20. The composition of claim 18 for oral administration.
- 21. A method of treating cancer comprising administering to a subject in need thereof an effective cancer-treating amount of the complex of claim 1 or a pharmaceutical composition thereof. 25